

Abstract

An antenna device using an approximate Luneburg lens, wherein high gain and low side-lobe are made compatible. A lens antenna device comprising, combine with each other, a radio wave lens (1) formed of a dielectric satisfying the condition, $0 < a \leq r$, where the distance from the front surface of a lens (4) to the focal point of the lens is a , and the radius of the lens r , and a primary radiator (2) having a 10-dB beam width θ wherein A , determined by the expression, $A = \theta/2 \times (1 + 2a/r)$, is at least 40 and up to 80, more preferably at least 50 and up to 70.